

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Applicant respectfully traverses the restriction requirement set forth in the above-noted Office Action.

The Examiner sets forth a restriction requirement among four groups of claims. Group I, claims 1-11, 15, 21, 22, 36, 37, 39, 41, 42, 44 and 46, is drawn to a wafer exposure apparatus, and is classified in class 700, subclass 121; Group II, claims 23-27, is drawn to a wafer processing method, and is classified in class 438, subclass 5; Group III, claims 28-35, is drawn to a wafer transfer system, and is classified in class 414, subclass 935; and Group IV, claim 45, is drawn to a maintenance method, and is classified in class 702, subclass 184.

The Examiner contends that the claims 12-14, 16-20 38 and 40 link the inventions of Groups I and II, and that claims 43 and 47 link the inventions of Groups I and IV and that the groupings have acquired a separate status in the art as shown by their different classification such that the searches are not coextensive, requiring separate examination. These contentions are respectfully traversed.

Applicants note that the inventions of Groups I-IV are so closely related in the field of exposure and wafer processing, that a proper search of any of the claims would, of necessity, require a search of the others. Thus, it is submitted that all of the claims can be searched simultaneously, and that a duplicative search, with possibly inconsistent results, may occur if the restriction requirement is maintained.

Applicants further submit that any nominal burden placed upon the Examiner to search an additional subclass or two, necessary to determine the art relevant to Applicants' overall invention, is significantly outweighed by the public interest in not having to obtain and study several separate patents in order to have available all of the issued patent claims covering Applicants' invention. The alternative is to proceed with the filing of multiple applications, each consisting of generally the same disclosure, and each being subjected to essentially the same search, perhaps by different Examiners on different occasions. This places an unnecessary burden on both the Patent and Trademark Office and on Applicant.

In the interest of economy, for the Office, for the public-at-large and for Applicants, reconsideration and withdrawal of the restriction requirement are requested.

Nevertheless, in order to comply with the requirements of 37 CFR 1.143, Applicants confirm the provisional election, with traverse, to prosecute the invention of Group I, namely claims 1-22, 36-44 and 47.

Notwithstanding the foregoing, claims 48-61 are presented for consideration in lieu of claims 1-47, which have been canceled without prejudice or disclaimer. Claim 48 is the sole independent claim. Claims 48-61 have been added to recite additional features of the subject invention. Support for these claims can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants request favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action.

Claim 22 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner objected to a specific recitation in this claim. Claim 22 having been canceled, this rejection has become moot and should be withdrawn. Nevertheless, the Examiner's comments were taken into consideration when presenting new claims 48-61.

Turning now to the art rejections, claims 1-21 and 36-41 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,319,322 to Ueda et al. Claims 42-44, 46 and 47 were rejected under 35 U.S.C. § 103 as being unpatentable over the Ueda et al. patent in view of U.S. Patent No. 5,761,064 to La et al. Applicants submit that the cited art, whether taken individually or in combination, does not teach many features of the present invention as previously recited in the claims. Therefore, these rejections are respectfully traversed. Nevertheless, Applicants submit that claims 48-61 amplify the distinctions between the present invention and the cited art.

Independent claim 48 recites an exposure apparatus for exposing a wafer to a pattern. The apparatus includes a chamber in which an atmosphere is conditioned to be different from an atmosphere in another apparatus outside of the exposure apparatus and the wafer is exposed to the pattern, and a port section through which the wafer is transferred between the chamber and the other apparatus. The port section has a load-lock mechanism including a vacuum mechanism for creating a vacuum inside of the port section and a supply mechanism for supplying an inert gas to the inside of the port section.

By such an arrangement, in the present invention, the port section can shield an atmosphere in the chamber of the exposure apparatus from an atmosphere in the apparatus in

loading/unloading a wafer between the chamber and the other apparatus. Thus, the present invention can prevent degradation of the atmosphere in the chamber of the exposure apparatus during loading/unloading of the wafer between the chamber and the other apparatus.

Applicants submit that the cited art does not teach or suggest such features of the present invention as recited in independent claim 48.

The Ueda et al. discloses an interface section 12 for sending and receiving a wafer W to/from an aligner 200, which is disposed adjacent to a coating and developing system 100. Column 9, line 44, to column 10, line 35 of this patent discusses that the interface section 12 has a supply mechanism for supplying a clean gas into the inside of the interface section. Applicants submit, however, that the Ueda et al. patent does not teach or suggest at least the features of the port section of the present invention recited in independent claim 48, which includes a vacuum mechanism for creating a vacuum inside of the port section and a supply mechanism for supplying an inert gas into the inside of the port section. Applicants submit, therefore, that the device in the Ueda et al. patent cannot prevent degradation of the internal atmosphere of the aligner 200 in loading/unloading the wafer into/from the aligner 200. Accordingly, Applicants submit that the Ueda et al. does not teach or suggest many features of the present invention as recited in independent claim 48.

Applicants further submit that the remaining art cited does not cure the deficiencies noted above with respect to the Ueda et al. patent.

The Examiner relies on the La et al. patent for disclosing a wafer defect management system for productivity and yield improvement in which manufacturing apparatuses are

connected by a local area network. Applicants submit that the La et al. patent, as with the Ueda et al. patent, does not teach or suggest the salient features of Applicants' present invention, as recited in independent claim 48, which have been discussed above. Therefore, the La et al. patent adds nothing to the teachings of the Ueda et al. patent that would render obvious Applicants' present invention recited in that claim.

For the foregoing reasons, Applicants submit that the present invention, as recited in independent claim 48, is also patentably defined over the cited art.

Dependent claims 49-61 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in independent claim 48. Further individual consideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,

  
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